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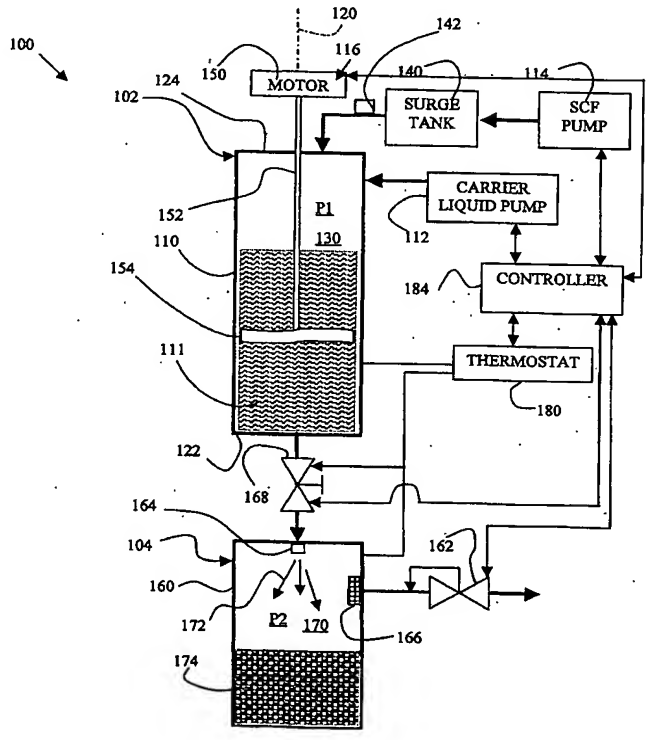
(54) Title: METHOD AND APPARATUS FOR SUPERCRITICAL FLUID ASSISTED PARTICLE PRODUCTION



(57) Abstract: The present invention provides an apparatus and methods of producing particles that include a polymer, a wax and/or lipid and, optionally, a biologically active substance. In accordance with the methods of the invention, a load stock including a polymer, a wax and/or a lipid that is a solid at standard temperature and pressure and, optionally, a biologically active substance is provided. The load stock is contacted with a supercritical fluid to form a melt. The melt is contacted with a polar solvent under suitable conditions to form an emulsion. The emulsion is expanded across a pressure drop to form solid particles that include the load stock. The methods and apparatus facilitate the production of very small particles that have a narrow particle size distribution.

WO 2004/071645 A2

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